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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/922,385	08/03/2001	Kevin Fisher	PA1621US	7484

8791 7590 07/25/2005

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EXAMINER	
MOORE JR, MICHAEL J	
ART UNIT	**PAPER NUMBER**
2666	

DATE MAILED: 07/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/922,385	FISHER ET AL.	
	Examiner	Art Unit	
	Michael J. Moore, Jr.	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 August 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *15-20* is/are allowed.

6)☒ Claim(s) *1-4,10,11 and 14* is/are rejected.

7)☒ Claim(s) *5-9,12 and 13* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 August 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/31/01*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 12/31/2001 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner has considered the information disclosure statement.

Specification

2. The disclosure is objected to because of the following informalities: An objection is made to Applicant's incorporation by reference of HomePNA 2.0 version 2.02.7 specification. It is requested by Examiner that Applicant provide this specification in response to this Office Action, as the Office was unable to attain this specification for examination, so that verification of the disclosed subject matter pertaining to this specification can be performed.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims **1 and 14** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims **1 and 14**, the limitation "the extended bandwidth signal having a bandwidth greater than a bandwidth of a signal that conforms to the bandwidth limitations of a HomePhoneline Networking Alliance 2.0 specification" renders this claim indefinite because it is not known with certainty what version of the HomePNA

specification is being referred to in these claims. It is suggested that a specification version number be provided in the claims.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims **1, 4, 10, and 14** are rejected under 35 U.S.C. 102(e) as being anticipated by Yagil et al. (U.S. 2002/0019966) ("Yagil"). Yagil teaches all of the limitations of the listed claims with the reasoning that follows.

Regarding claim **1**, "an extended bandwidth HomePhoneline Alliance system" is anticipated by the HomePNA system shown in Figure 4. "A transmitter configured to transmit an extended bandwidth signal" is anticipated by HomePN transmitter 100 shown in Figure 1 that uses extended frequency bands as spoken of on page 3, paragraph 45, lines 1-8. Lastly, "the extended bandwidth signal having a bandwidth greater than a bandwidth of a signal that conforms to the bandwidth limitations of a HomePhoneline Networking Alliance 2.0 specification" is anticipated by Figure 5 which shows alternate bandwidths used (4 MHz to 14MHz, 20KHz to 10MHz, 20KHz to 15MHz) that have greater bandwidth than current HomePNA standards (4MHz to 10MHz) as spoken of on page 4, paragraph 48.

Regarding claim **4**, "wherein the bandwidth of the extended bandwidth signal is greater than 6 MHz" is anticipated by Figure 5 which shows alternate bandwidths used (4 MHz to 14MHz, 20KHz to 10MHz, 20KHz to 15MHz) that have greater bandwidth than current HomePNA standards (4MHz to 10MHz) as spoken of on page 4, paragraph 48.

Regarding claim **10**, "a transmission medium and a receiver configured to receive the extended bandwidth signal from the transmitter via the transmission medium" is anticipated by HomePN receiver 200 shown in Figure 2 as well as phone lines 406 (transmission medium) shown in Figure 4 that connect HomePN stations 300.

Regarding claim **14**, "an extended bandwidth HomePNA system" is anticipated by the HomePNA system shown in Figure 4. "Means for generating an extended bandwidth signal" is anticipated by HomePN transmitter 100 shown in Figure 1 that uses extended frequency bands as spoken of on page 3, paragraph 45, lines 1-8. Lastly, "the extended bandwidth signal having a bandwidth greater than a bandwidth of a signal that conforms to the bandwidth limitations of a HomePhoneline Networking Alliance 2.0 specification" is anticipated by Figure 5 which shows alternate bandwidths used (4 MHz to 14MHz, 20KHz to 10MHz, 20KHz to 15MHz) that have greater bandwidth than current HomePNA standards (4MHz to 10MHz) as spoken of on page 4, paragraph 48.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims **2 and 3** are rejected under 35 U.S.C. 103(a) as being unpatentable over Yagil et al. (U.S. 2002/0019966) ("Yagil").

Regarding claim **2**, Yagil teaches the system of claim **1**. Yagil does not explicitly teach where the extended bandwidth signal has a bandwidth of 12MHz. However, Yagil does teach alternate bandwidths used such as 10MHz (4 MHz to 14MHz) in Figure 5 that are greater than the current HomePNA standard bandwidth of 6MHz (4MHz to 10MHz) as spoken of on page 4, paragraph 48. At the time of the invention, it would have been obvious to someone skilled in the art to modify the extended bandwidth teachings of Yagil from an extended bandwidth of 10MHz to 12MHz in order to provide further increased bandwidth for the system.

Regarding claim **3**, Yagil teaches the system of claim **2**. Yagil does not explicitly teach where the 12MHz bandwidth of the extended bandwidth signal spans the

frequencies from 4MHz to 16MHz. However, Yagil does teach alternate bandwidths used such as 10MHz that ranges from 4 MHz to 14MHz in Figure 5 that are greater than the current HomePNA standard bandwidth of 6MHz (4MHz to 10MHz) as spoken of on page 4, paragraph 48. At the time of the invention, it would have been obvious to someone skilled in the art to modify the extended bandwidth teachings of Yagil from an extended bandwidth of 10MHz (ranging from 4MHz to 14MHz) to 12MHz (ranging from 4MHz to 16MHz) in order to provide further increased bandwidth for the system.

10. Claim **11** is rejected under 35 U.S.C. 103(a) as being unpatentable over Yagil et al. (U.S. 2002/0019966) ("Yagil") in view of Lin et al. (U.S. 6,868,072) ("Lin").

Regarding claim **11**, Yagil teaches the system of claim **10**. Yagil fails to teach where the receiver is configured to train on the extended bandwidth signal and to decode the extended bandwidth signal to recover data included in the extended bandwidth signal. However, Lin teaches a HomePN network architecture where a training sequence is used in order to reliably decode a following transmitter parameter header. At the time of the invention, it would have been obvious to someone skilled in the art to use the training teachings of Lin with the extended bandwidth teachings of Yagil in order to reliably decode the extended bandwidth signal.

Allowable Subject Matter

11. Claims **15-20** are allowed.

12. Claims **5-9, 12, and 13** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim **5**, the prior art of record fails to teach where the bandwidth of the extended bandwidth signal includes more than one and one half copies of a spectrum of a 4 Mbaud signal.

Regarding claim **6**, the prior art of record fails to teach where the bandwidth of the extended bandwidth signal includes three copies of a spectrum of a 4 Mbaud signal.

Regarding claim **7**, the prior art of record fails to teach where the bandwidth of the extended bandwidth signal includes more than three copies of a spectrum of a 2 Mbaud signal.

Regarding claim **8**, the prior art of record fails to teach where the bandwidth of the extended bandwidth signal includes six copies of a spectrum of a 2 Mbaud signal.

Regarding claim **9**, the prior art of record fails to teach where the spectral content of the extended bandwidth signal enables a HomePNA 2.0 receiver in 2 Mbaud mode to train on the extended bandwidth signal and determine that the extended bandwidth signal is not intended for the HomePNA 2.0 receiver in 2 Mbaud mode.

Regarding claim **12**, the prior art of record fails to teach where the transmitter includes a module for upsampling a 2 Mbaud signal to an 8 Mbaud signal, a 1MHz modulator for modulating the 8 Mbaud signal, a pulse shaping filter for filtering the output of the 1MHz modulator to a 12MHz baseband spectrum, and a 10MHz modulator for modulating the filtered signal with a 10MHz carrier.

Regarding claim **13**, this claim is further limiting to claim **12** and is thus also allowable over the prior art of record.

Regarding claim **15**, the prior art of record fails to teach a training sequence generation method that upsamples a 2 Mbaud signal to an 8 Mbaud signal, modulates the 8 Mbaud signal with a 1 MHz signal, filters the modulated 8 Mbaud signal producing a filtered signal with a 12MHz wide baseband spectrum, and modulates the filtered signal with a 10MHz carrier signal to produce the training sequence.

Regarding claims **16-20**, these claims are further limiting to claim **15** and are thus also allowable over the prior art of record.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wu (U.S. 2002/0003835) and Harman (U.S. 6,329,937) are references that contain material pertinent to this application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Moore, Jr. whose telephone number is (571) 272-3168. The examiner can normally be reached on Monday-Friday (8:30am - 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached at (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael J. Moore, Jr.
Examiner
Art Unit 2666

mjm MM

FRANK DUONG
PRIMARY EXAMINER